Claim 9, cancel the last line and insert -.-- at the end of line 3.

Claim 16, line 4, change "contains" to --consists of--

line 9, after "transformed", insert --cells--

REMARKS

Reconsideration of this application is requested in view of the amendments to the claims and the remarks presented herein.

The claims in the application are claims 1 to 7 and 9 to 16, all other claims having been cancelled.

With respect to the Examiner's rejection of claim 15 under 35 USC 112, second paragraph, it is deemed that this is obviated by the cancellation of the term "arvecular" from the claim. Therefore, withdrawal of this ground of rejection is requested. It is believed that this amendment therefor obviates the Examiner's objections to the specification as well.

Claims 9, 10 and 16 were objected to as being of improper dependent form and Applicants believe that the present amendment obviates these objections. Claim 9 is now dependent upon claim 16. Claim 10 has been amended to recite "consists of" and deletes the word "has". Claim 16 has been amended to obviate the Examiner's objection thereto. Therefore, withdrawal of these objections is

requested.

Claims 9, 10 and 16 were rejected under 35 USC 112, second paragraph, as being indefinite. The Examiner deemed claim 9 to be confusing since it was incomplete. Claim 10 was deemed to be indefinite in the expression "dimer protein", claims 9 and 10 were being objected to as being ambiguous and claim 16 was objected to as being incomplete.

It is believed that the amended claims properly define the invention. Claim 9 has been amended to make it dependent upon claim 16 as noted above and the expression "dimer" has been deleted from claim 10 as suggested by the Examiner as well as the phrase relating to N-terminus. The term "cells" has been added to claim 16 and claim 16 has been limited to specify specifically that it consists of the DNA sequence of SEQ ID No: 4. Therefore, the amended claims are believed to comply with 35 USC 112 and withdrawal of these grounds of rejection is requested.

Claim 1 was rejected under 35 USC 103 as being obvious over the Celeste et al and Ozkaynak et al references taken in view of the Ben-Bassat et al, Tonouchi et al, Sherman et al and Georgiou references. Claims 1, 2 and 10 were rejected under 35 USC 103 as being obvious over the said combination of the prior art taken in view of the Hotten et al and Cerletti et al references. Claims 1, 9 and 16 were rejected under 35 USC 103 as being obvious over the

said combination of the references taken in further view of the Sambrook et al, Hsiung et al and Galfand et al references. Claims 1 to 7 and 11 to 15 were rejected under 35 USC 103 as being obvious over the said prior art as applied to claim 2 taken in further view of the Neidhard et al, Adams et al and Ethridge patents. The Examiner states that the Celeste et al reference teaches a protein NP52 which contains amino acids No. 1 to No. 120 of Celeste et al's SEQ ID No: 4 which the Examiner alleges are identical to Applicants' SEQ ID No: 1, namely, amino acids No. 2 to No. 120 of Celeste et al. Celeste et al is further cited to show that the first cysteine of the 7-cysteine domain of MP52 is encoded by the codon beginning at nucleotide No. 899 of SEQ ID No: 3 and the said codon encodes amino acid No. 19 of SEQ ID No: 4 and also teaches human MP52 proteins containing the amino acid sequence from amino acids 17 or 19 to 119 or 120 of SEQ ID No: 1 as being expected to retain activity.

The Examiner further alleges that Applicants' SEQ ID No: 1 is the amino acid sequence of a mature protein in the TGF-ß superfamily. The Examiner alleges the Ozkaynak et al reference as teaching the N-terminal residues upstream of the 7-cysteine domains of the mature proteins in the TGR-ß superfamily and that the mature N-termini of different members are quite diverse. The Examiner concludes that one of ordinary skill in the art would reasonably expect that a protein consisting of the amino acid sequence SEQ ID No: 1 would be biologically active because Celeste et al teaches

that amino acid residues 1 to 18 can be deleted without effecting biological activity and that the Ozkaynak et al references teaches that the N-termini upstream of the 7-cysteine domains are not essential for biological activity. The Examiner concedes that the two references do not explicitly teach producing a protein consisting of an amino acid sequence SEQ ID No: 1 by expressing a protein with the N-termini sequence Met-Pro- but relies upon the secondary references as teaching the same.

Applicants respectfully traverse these new grounds of rejection since the combination of the prior art, which the Examiner has created with the benefit of Applicants' teachings, would not suggest to one skilled in the art Applicants' novel sequence nor the treatment of the bone disease. It should be noted that the final rejection was completely improper since the Examiner has relied upon eight newly cited references and therefore, the rejection is deemed to be improper and the finality thereof should be withdrawn.

In view of the am ndments to the claims and the above remarks, it is believed that the claims clearly point out applicants' invention and favorable reconsideration of the application is requested.

Respectfully submitted,
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CAM:sd
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